

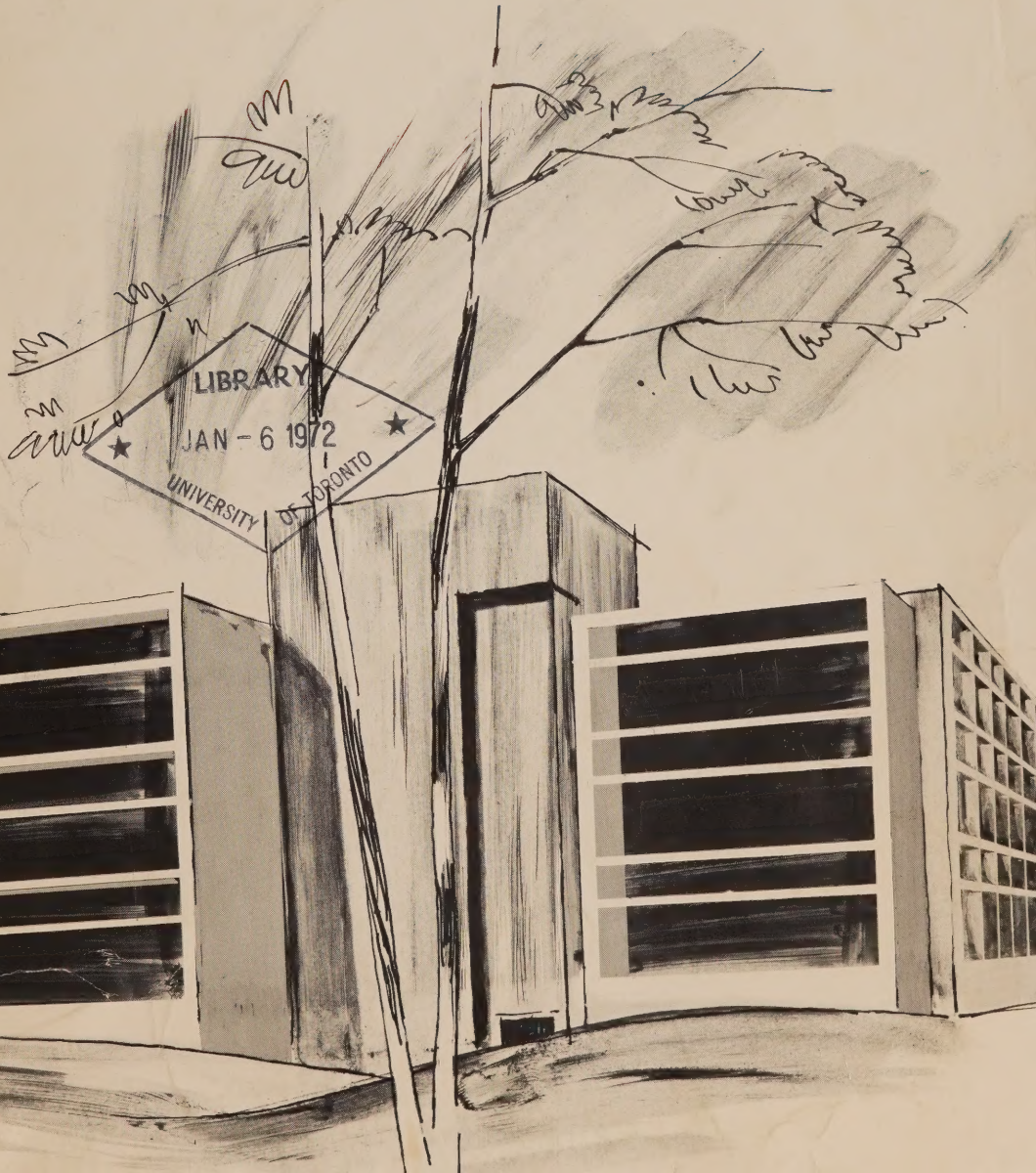
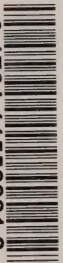
atmospheric  
environment  
service  
headquarters

service  
général  
de l'environnement  
atmosphérique

Canada. Atmospheric environment service

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EP350  
- 1971  
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In 1871, the newly formed Meteorological Service was located in the Dominion Magnetic Observatory on the grounds of the University of King's College (the present day University of Toronto).

By the turn of the century, increased staff and operational considerations required that larger quarters be found. A suitable building was constructed at 315 Bloor Street West and was occupied as headquarters of the Meteorological Service in 1909.

The inauguration of Trans Canada Airlines in the thirties and the outbreak of World War II stimulated a major expansion in Meteorological Service activities. The resulting training, research and instrument testing programs as well as the archives necessary for data storage required space that was not available at 315 Bloor. Consequently the Service entered a dispersive phase during which divisions were relocated at auxiliary buildings often at great distances from the main headquarters. This decentralizing trend continued and by 1970, headquarters' units were located in nearly a dozen Toronto office buildings.

Coincident with its centenary in 1971, the Canadian Meteorological Service, regenerated as the Atmospheric Environment Service, moved into a new headquarters' building at 4905 Dufferin Street, Downsview. This building consists of four storeys with a total floor space of 339,000 square feet. Approximately 800 people occupy the building and facilities that are available for operations, training and research include a 96 foot wind tunnel, a satellite data laboratory and receiving station, a modern computer with multiple input-output devices, a 290 seat auditorium, a library containing scientific and historical books, maps, micro-films and periodicals; closed circuit television capabilities, and teletype and facsimile links with national and international circuits.

En 1871, lors de sa fondation, le Service météorologique s'établit au "Dominion Magnetic Observatory" sur les terrains de ce qui était à l'époque l'université King's College, devenue par la suite l'Université de Toronto.

Au tournant du siècle, l'augmentation du personnel et d'autres considérations d'efficacité exigeaient déjà des locaux plus spacieux. Un bâtiment fut érigé à cette fin au 315 ouest, rue Bloor et devint en 1909 le siège social du Service météorologique.

L'inauguration, dans les années trente, de la société "Trans-Canada Airlines" et le début de la Deuxième guerre mondiale suscitèrent un élargissement considérable des activités du Service météorologique. Les programmes de formation, de recherches, d'essais des instruments et d'archives nécessités par cet essor, eurent tôt fait de rendre encore inadéquats les locaux occupés sur la rue Bloor. Le Service météorologique entra alors dans une phase de décentralisation qui devait éventuellement aboutir en 1970 à la dispersion de plusieurs des Divisions dans une douzaine d'immeubles souvent très éloignés les uns des autres même si, géographiquement parlant, ils étaient situés dans les limites de la Ville de Toronto.

A l'occasion du centenaire de sa fondation, cette année, le Service météorologique canadien, rebaptisé "Atmospheric Environment Service" (Service de l'environnement atmosphérique), a donc déménagé intégralement dans un nouvel édifice situé au 4905 rue Dufferin, Downsview. Cet immeuble de quatre étages couvrant une superficie totale utilisable de 339,000 pieds carrés, groupe un effectif de 800 personnes et comprend parmi ses aménagements de formation, de recherches et d'exploitation, un tunnel aérodynamique de 96 pieds, un laboratoire de données de satellites avec poste de réception, un ordinateur moderne à dispositifs d'entrée et de sortie multiples, un auditorium de 290 places, une bibliothèque réunissant des ouvrages scientifiques et historiques, des cartes, des microfilms, et des périodiques; de même qu'une installation de télévision à circuit fermé et des liaisons de télétypes et de fac-similés reliées à des circuits nationaux et internationaux.

1871



1971



Canada: Atmospheric Environment Service

Government  
Publications

Annual publications

CAH EP 200

EP 350

-1971


A72



# ATMOSPHERIC ENVIRONMENT SERVICE

HEADQUARTERS BUILDING

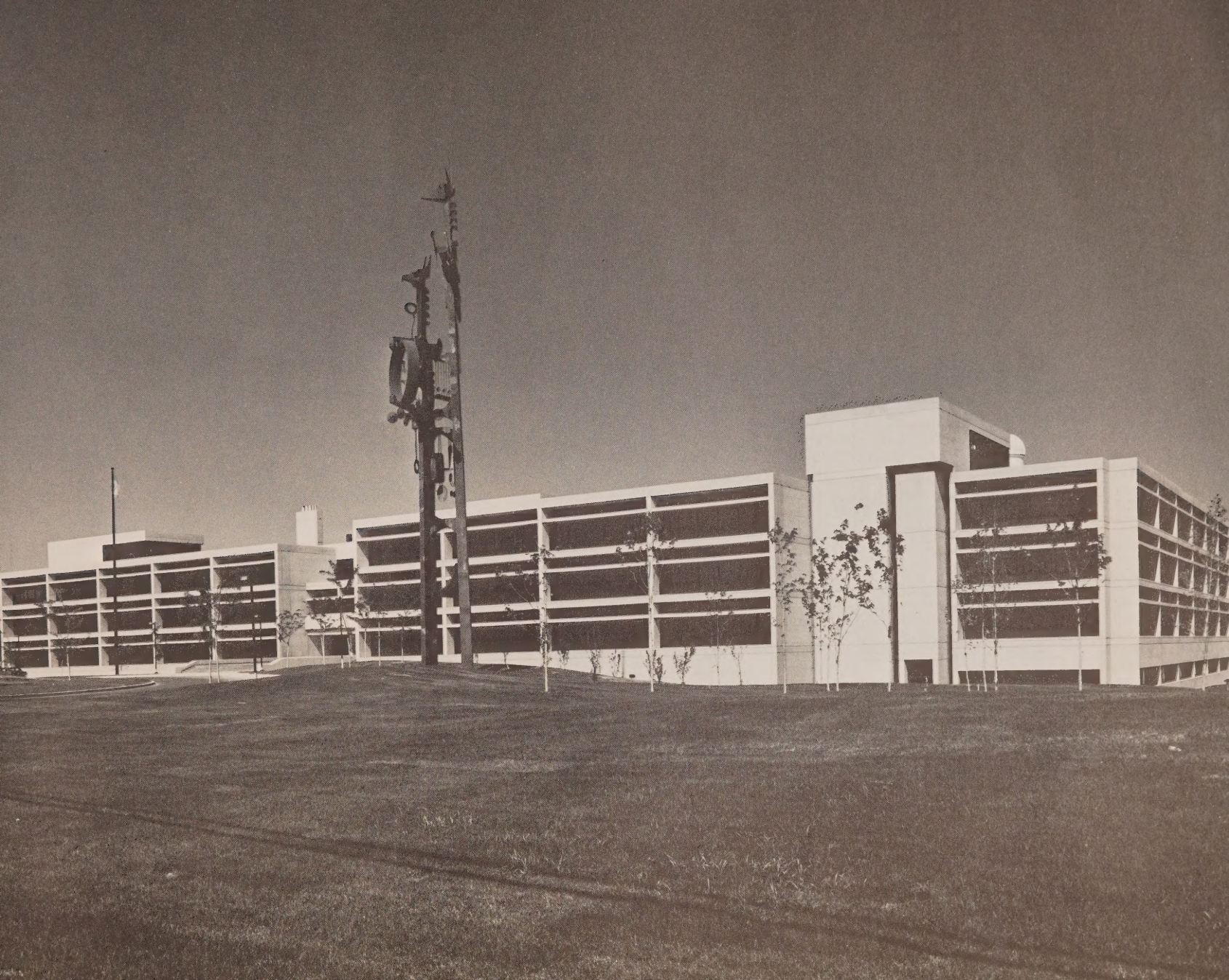




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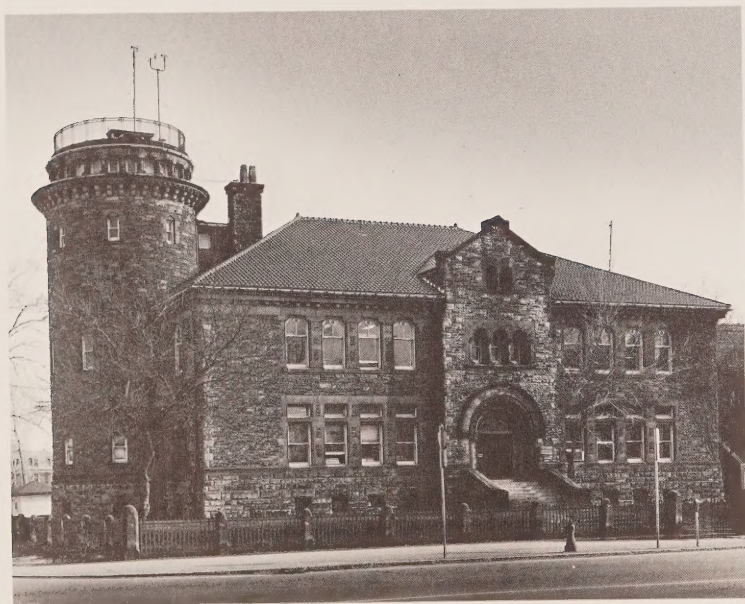
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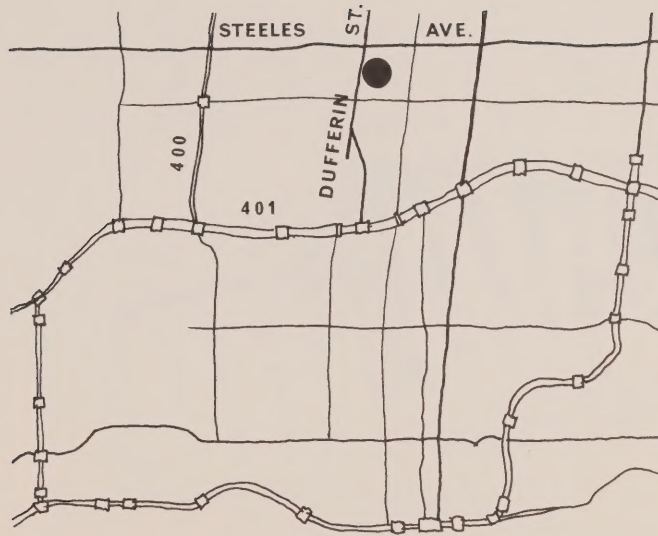


HEADQUARTERS BUILDING 1909 TO 1971



# INTRODUCTION

METEOROLOGICAL HEADQUARTERS BUILDING



LOCATION MAP

The new Headquarters Building for the Meteorological Service of the Department of the Environment of Canada brings together in one building the various operations carried out in many separate locations in the Metropolitan Toronto area. The consolidation of the Meteorological Service in this new building designed for their specialized needs will result in space economies, increased management and operational efficiencies and permit the carrying out of research and other programmes previously curtailed by inadequate accommodation.

In May 1966, Boigon and Heinonen Architects as consultants to the Department of Public Works, commenced initial planning on the new Headquarters Building.

# DESIGN CONCEPT

METEOROLOGICAL HEADQUARTERS BUILDING

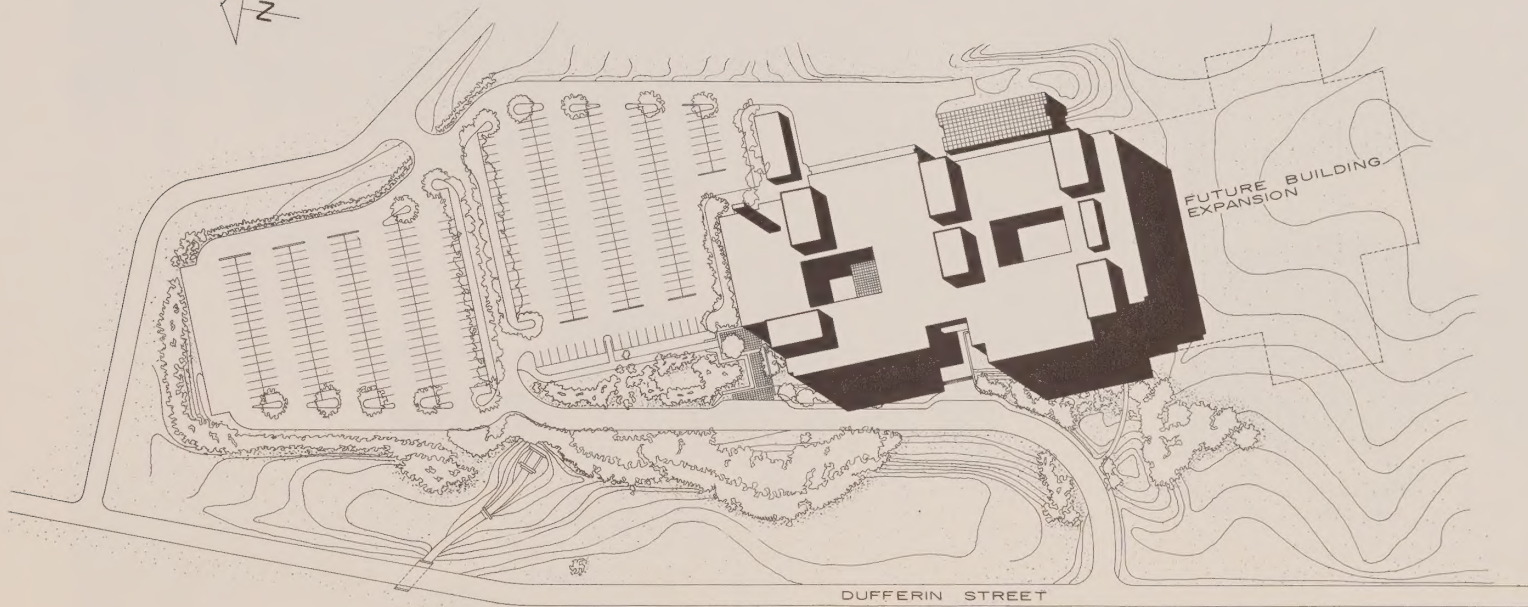
The various requirements in the programme for the Meteorological Headquarters, included offices, warehousing facilities, classrooms, Lecture Theatre, Research Library and Archives, Cafeteria and such specialized scientific facilities as Observation Domes, Radar Equipment and Wind Tunnels for research purposes.

Because of the variety, size and nature of these activities a building design was required which allowed maximum flexibility for future change. This flexibility plus a need to satisfy many departmental relationships were best achieved in a building with large continuous floor areas. It was also felt that the opportunity for personal contact among scientists of differing specialties would occur more naturally in a unified horizontal building and this was considered a major benefit to be encouraged and planned for in the new building.



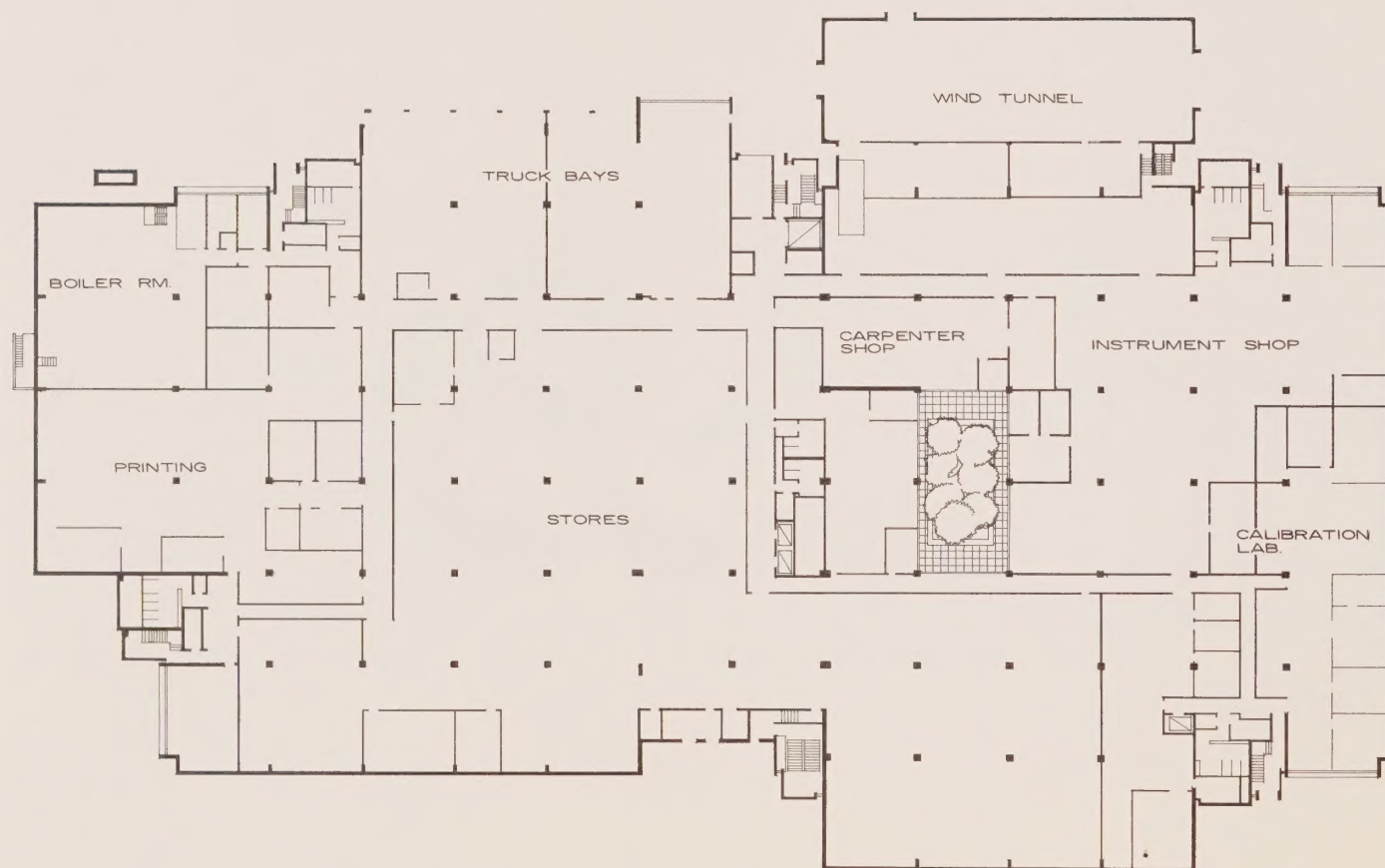
# SITE PLAN

METEOROLOGICAL HEADQUARTERS BUILDING



# FIRST FLOOR PLAN

METEOROLOGICAL HEADQUARTERS BUILDING

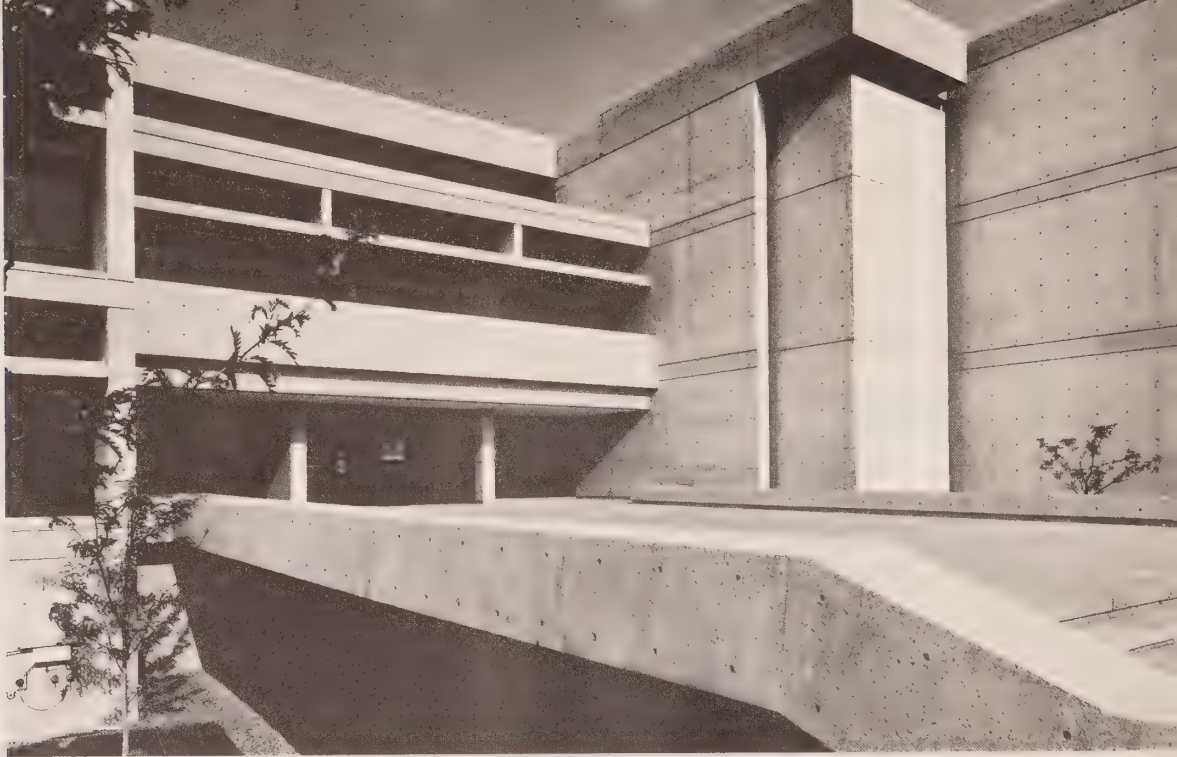




VIEW FROM NORTH WEST



MAIN ENTRANCE



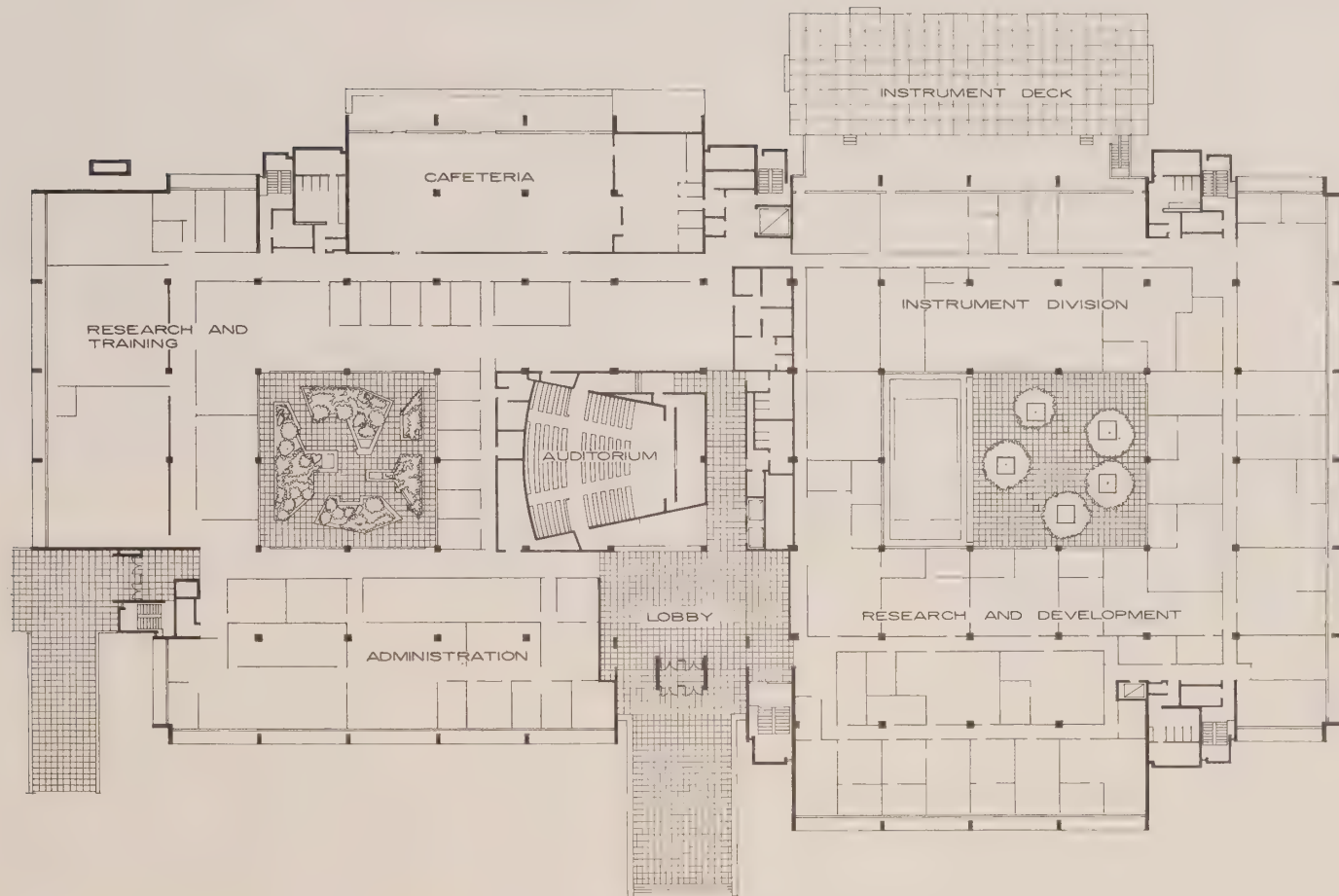
AUDITORIUM





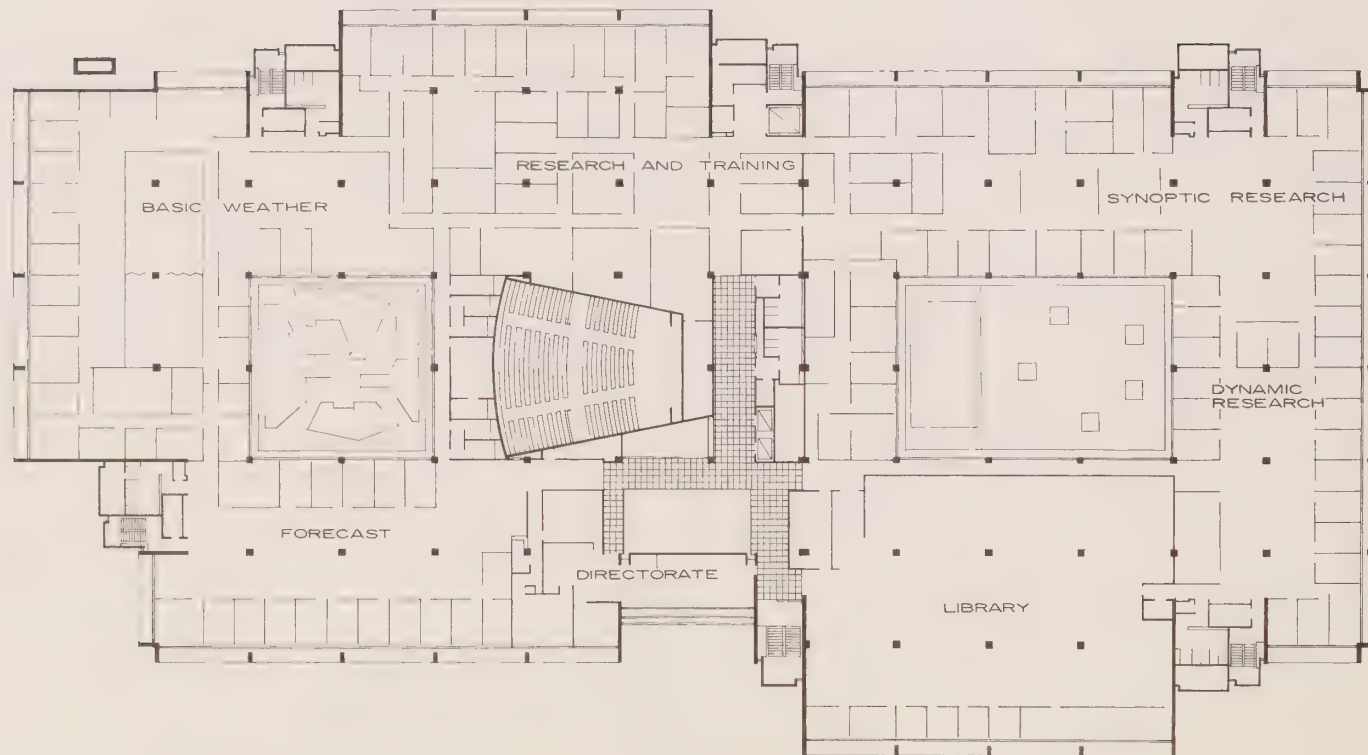
# SECOND FLOOR PLAN

METEOROLOGICAL HEADQUARTERS BUILDING



# THIRD FLOOR PLAN

METEOROLOGICAL HEADQUARTERS BUILDING





THE NORTH COURT





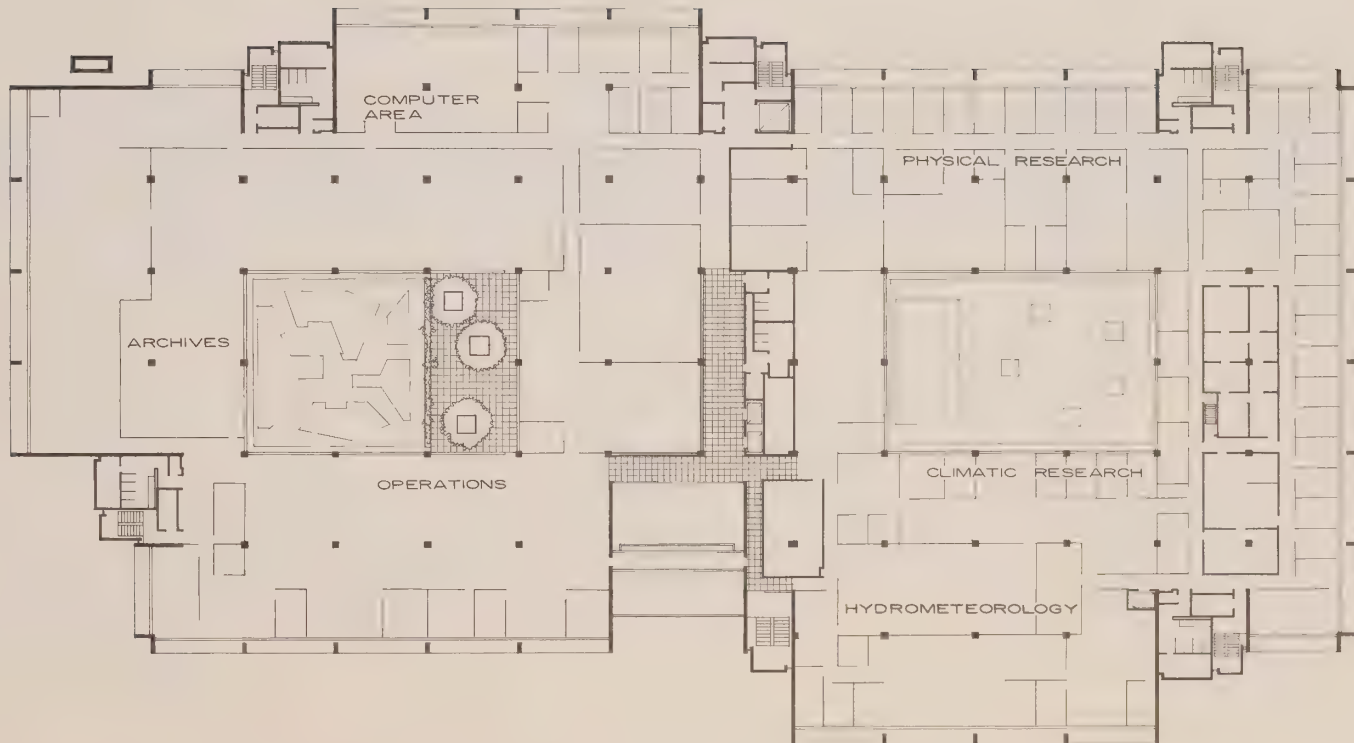
THE SOUTH COURT





# FOURTH FLOOR PLAN

MÉTÉOROLOGICAL HEADQUARTERS BUILDING



# ROOF PLAN

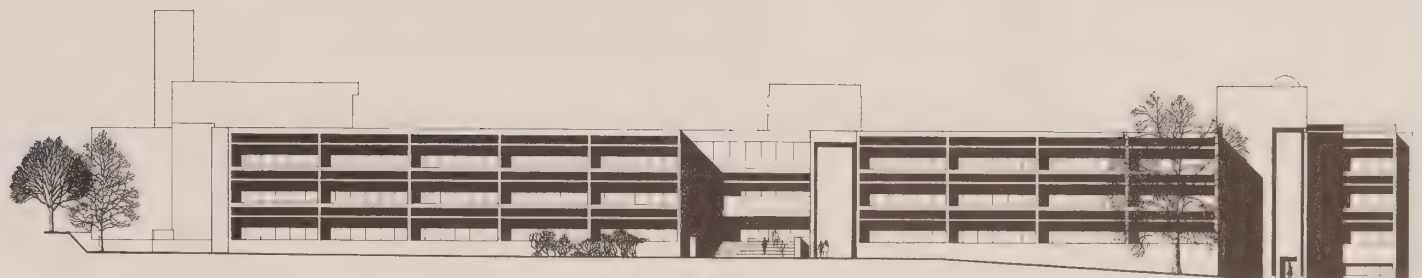
METEOROLOGICAL HEADQUARTERS BUILDING



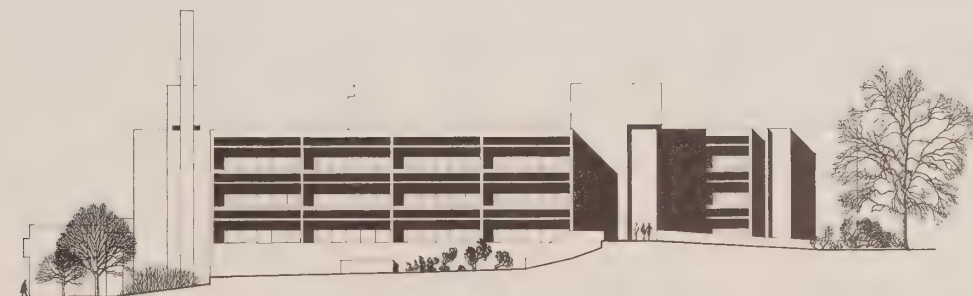


# ELEVATIONS

METEOROLOGICAL HEADQUARTERS BUILDING



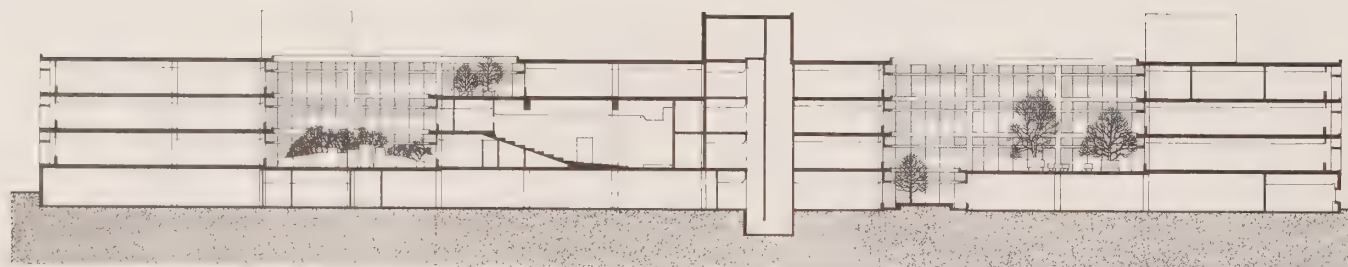
WEST ELEVATION



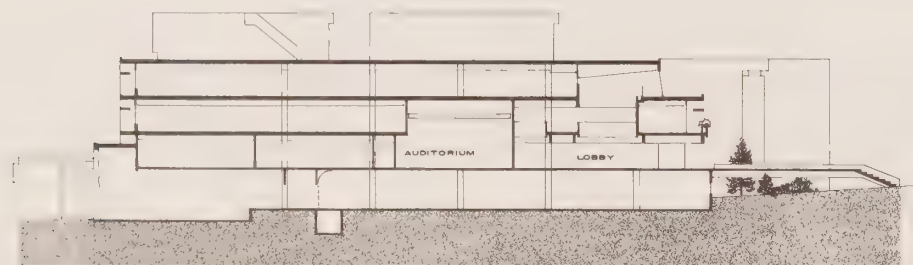
NORTH ELEVATION

# SECTIONS

METEOROLOGICAL HEADQUARTERS BUILDING



LONGITUDINAL SECTION



CROSS SECTION





TYPICAL SERVICE CORE

TYPICAL EXTERIOR WALL





# CONSTRUCTION DESIGN

METEOROLOGICAL HEADQUARTERS BUILDING

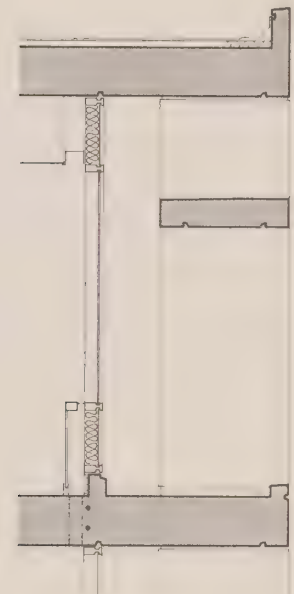
The structure is of reinforced concrete flat slab design using a planning module of 5 feet with the typical structural bay of 30' x 30'.

The exterior design expresses the structural system employing sand-blasted and special striated bush-hammered finishes on the exposed architectural concrete surfaces.

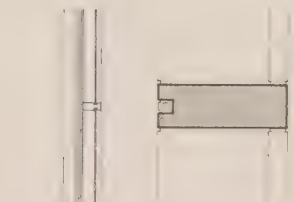
The windows are of bronze tinted insulating glass with dark bronze anodized aluminum frames and spandrel panels.

In offices and Lab areas, modular steel moveable partitions are employed while ceilings throughout are lay-in acoustic tile, and flooring is vinyl asbestos.

Windows are protected from sun and sky glare by a horizontal concrete sunshade member and the projection of the main floor slab.



SECTION



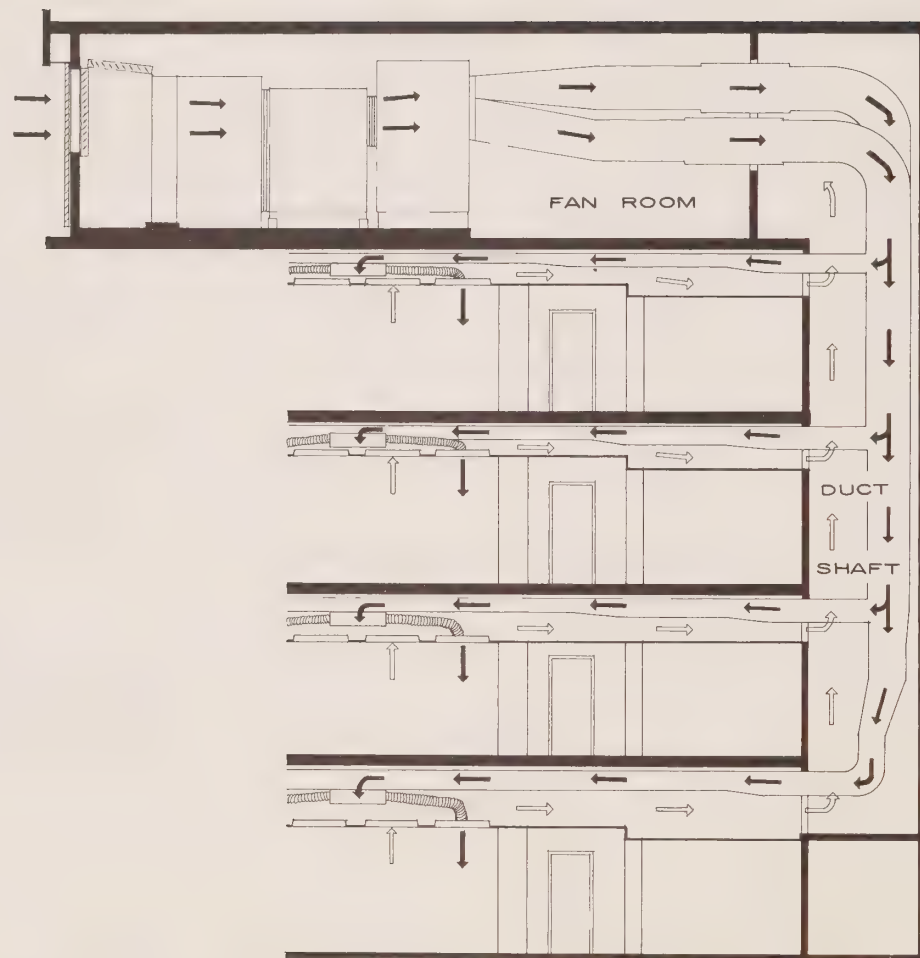
PLAN

# MECHANICAL SYSTEM

METEOROLOGICAL HEADQUARTERS BUILDING

The heating and air conditioning system is a double duct system using gas as the prime fuel with steam as the heat source. Distribution of the high velocity heating and cooling is made from six main rooftop fan rooms. These fan rooms are located over utility cores, which serve as main vertical duct shafts, and also contain washrooms, stairs and other services. To avoid conflict with scientific observations to be made at the roof level, the cooling tower is located at ground level and this also dictated the use of gas as a fuel.

Typical lighting is one air handling fluorescent fixture per 5' x 5' module. Electrical power and communication systems are in underfloor duct systems with special raceway systems designed into partitions in laboratory areas.

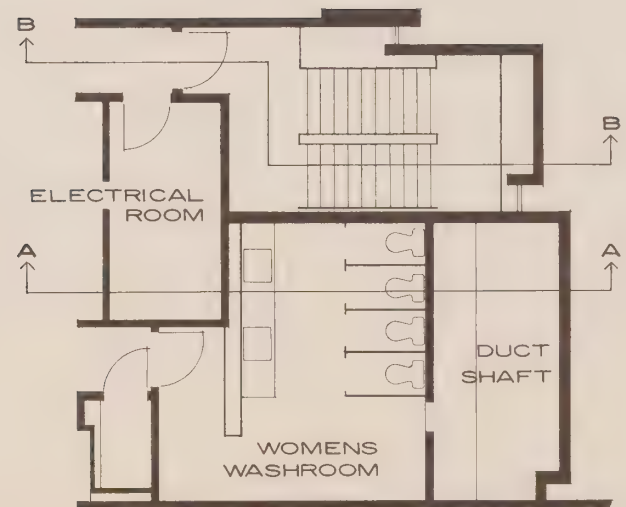
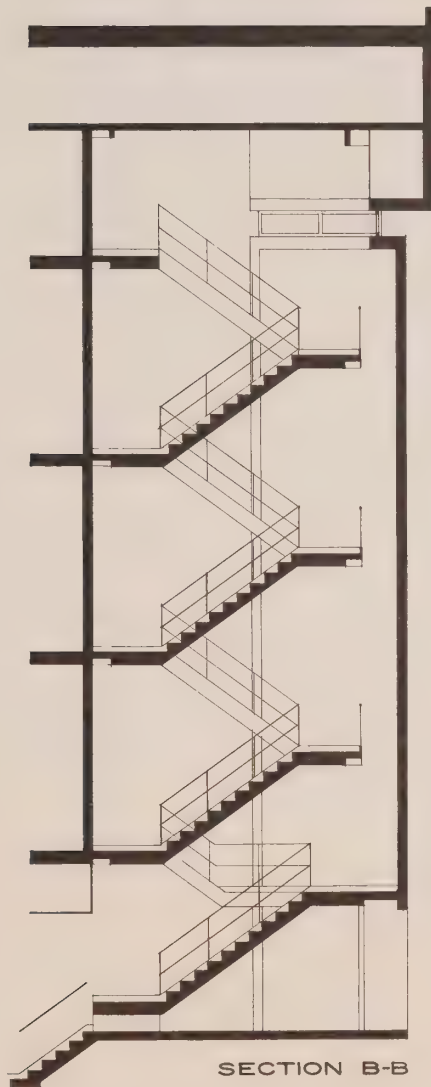


SECTION A-A



# TYPICAL SERVICE CORE

METEOROLOGICAL HEADQUARTERS BUILDING







# CREDITS

METEOROLOGICAL HEADQUARTERS BUILDING

## CONSTRUCTION AUTHORITY:

Department of Public Works of Canada

## ARCHITECTS:

Boigon and Heinonen Architects

## ENGINEERS:

Structural: John Maryon & Partners Limited

Mechanical/Electrical: Rybka, Smith & Ginsler Ltd.

Landscape Architects: Johnson, Sustronk, Weinstein & Associates Limited

Sculpture by Ron Baird

## CONSTRUCTION:

General Contractor: W. A. McDougall Limited

Mechanical Contractor: Fraser Brace Limited

Electrical Contractor: Canadian Comstock Limited

Gross Floor area: 340,000 sq. ft.

Total Cost: \$8,030,000.

Started Construction: June 1969.

Completed Construction: June 1971.













### Nationwide Weather Service

The Canadian Meteorological Service, now the Atmospheric Environment Service, takes observations, prepares forecasts and keeps records for locations in all the provinces and territories of Canada. The dots on the map represent stations where at least one observation of weather elements is taken daily.

### Relévé météorologiques pour l'ensemble du territoire

Le Service météorologique canadien, rebaptisé Service de l'environnement atmosphérique, effectue des observations, prépare des prévisions et tient des dossiers pour toutes les provinces et territoires du Canada. Les points marqués sur la carte représentent les stations où l'on relève des observations météorologiques au moins une fois par jour.



Canadian Government  
Printing Bureau  
Bureau d'imprimerie du  
gouvernement canadien

Receiving  
Réception

Wind Tunnel  
Tunnel aérodynamique

Meteorological Stores  
Magasins météorologiques

Instrument Division  
Division des instruments

First Floor/Rez-de-chaussée

Research and Training  
Division  
Division des recherches  
et de la formation

Cafeteria  
Réfectoire

Auditorium  
Auditorium

Administration Division  
Division de l'administration

Instrument Division  
Division des instruments

Second Floor/Premier étage

Basic Weather Division  
Division de la météorologie  
fondamentale

Auditorium  
Auditorium

Research and Training  
Division  
Division des recherches  
et de la formation

Courtyards  
Cours

Forecast Division  
Division de prévision

Directorate  
Direction

Library  
Bibliothèque

Third Floor/Deuxième étage

Climatology Division  
Division de la climatologie

Research and Training  
Division  
Division des recherches  
et de la formation

Fourth Floor/Troisième étage

Courtyards  
Cours

N

